

## Amendments to the Claims

1. (Currently Amended) Device for determining the position of ~~an in particular a~~ metallic target (50), ~~particularly for performing the method according to one of the claims~~ ~~16 to 24,~~ with at least two detection devices ~~(14, 24, 34)~~ which are so positioned along a path ~~(51)~~ to be monitored that the sensitivity curve ~~(15, 25, 35)~~ of immediately adjacent detection devices ~~(14, 24, 34)~~ at least partly overlap, the detection devices ~~(14, 24, 34)~~ having in each case at least one ~~inductivity~~ ~~(16, 26, 36)~~ inductance coil and at least one oscillator ~~(18, 28, 38)~~ and, as a function of a distance of the target (50) from the detection device ~~(14, 24, 34)~~, supply a distance signal, with at least one converting device ~~(19, 29, 39, 59)~~ operatively connected to the detection devices ~~(14, 24, 34)~~ for converting the distance signals detected by the detection devices ~~(14, 24, 34)~~ into analogue signals, ~~particularly current and/or voltage signals,~~ and with at least one evaluating device ~~(52)~~ operatively connected to the at least one converting device ~~or devices~~ ~~(19, 29, 39, 59)~~ for determining and reading out a local position of the target (50) from analogue signals going back to the particular detection devices ~~(14, 24, 34)~~, a damping signal of the oscillator being in each case outputtable by the detection devices ~~(14, 24, 34)~~ as the distance signal, ~~characterized in that~~ wherein a damping curve of a detection device ~~(14, 24, 34)~~ in each case has partial areas with high positional resolution, ~~that~~ wherein the detection devices ~~(14, 24,~~

~~34)~~ are so positioned that from the partial areas of high positional resolution of the individual detection devices ~~(14, 24, 34)~~ it is possible to compose a detection curve for the entire path to be monitored and ~~that wherein~~ the detection devices ~~(14, 24, 34)~~ are arranged in two, ~~particularly~~ parallel rows in mutually displaced manner for increasing the positional resolution.

2. (Currently Amended) Device according to claim 1, ~~characterized in that wherein~~ in the partial areas of high positional resolution the positional resolution is everywhere greater than 10%, ~~preferably everywhere greater than 20% and in particularly preferred manner everywhere greater than~~ 40% of the maximum positional resolution.
3. (Currently Amended) Device according to ~~one of the claims~~ claim 1 to 2, ~~characterized in that wherein~~ the detection devices ~~(14, 24, 34)~~ are equidistantly arranged along the path.
4. (Currently Amended) Device according to ~~one of the claims~~ claim 1 to 3, ~~characterized in that wherein~~ there is a guide device for guiding the target ~~(50)~~ along the path to be monitored.

5. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 4,

~~characterized in that~~ wherein there is a target ~~(50)~~  
movably positioned in the guide device.

6. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 5,

~~characterized in that~~ wherein  
the detection devices ~~(14, 24, 34)~~ are so positioned  
along the path to be monitored that they are in each  
case only partly coverable by the target ~~(50)~~.

7. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 6,

~~characterized in that~~ wherein  
the detection devices ~~(14, 24, 34)~~ are so positioned  
along the path to be monitored that they are in each  
case only 90%, preferably only 85% and in particularly  
~~preferred manner only~~ 80% coverable by the target ~~(50)~~.

8. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 7,

~~characterized in that~~ wherein  
the dimensions of the target ~~(50)~~ are so chosen or  
formed that an individual detection device ~~(14, 24, 34)~~  
can only be partly covered by the target ~~(50)~~.

9. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 8,

~~characterized in that~~ wherein  
the target ~~(50)~~ is a small metal plate.

10. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 9,

~~characterized in that~~ wherein

with each detection device ~~(14, 24, 34)~~ is associated a  
converting device ~~(19, 29, 39, 59)~~.

11. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 9,

~~characterized in that~~ wherein

there is at least one multiplexer ~~(54)~~ between a  
converting device ~~(59)~~ and a plurality of detection  
devices ~~(14, 24, 34)~~.

12. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 11,

~~characterized in that~~ wherein

~~the inductivities (16, 26, 36), particularly the~~  
inductance coils of the detection devices ~~(14, 24, 34)~~  
are arranged with their axes ~~transverse, particularly~~  
perpendicular to the path ~~(51)~~ to be monitored.

13. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 12,

~~characterized in that~~ wherein

the ~~inductivity (16, 26, 36)~~ inductance coil is provided  
as part of the oscillator ~~(18, 28, 38)~~ in at least part  
of the detection devices ~~(14, 24, 34)~~.

14. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 13,

~~characterized in that~~ wherein

the detection devices ~~(14, 24, 34)~~ are so positioned  
that the areal overlap of the sensitivity curves ~~(15,  
25, 35)~~ or damping curves of mutually adjacent detection  
devices ~~(14, 24, 34)~~ is between 20 and 50%, particularly  
~~between~~ 25 and 35%.

15. (Currently Amended) Device according to ~~one of the claims~~  
claim 1 to 14,

~~characterized in that~~ wherein

the detection devices ~~(14, 24, 34)~~ can in each case  
determine a radial spacing of the target ~~(50)~~ from an  
axis of the inductance coil ~~(16, 26, 36)~~.

16. (Currently Amended) Method for determining the position of  
~~an in particular~~ a metallic target ~~(50)~~, in which at  
least two detection devices ~~(14, 24, 34)~~ are so  
positioned along a path ~~(51)~~ to be monitored that the  
sensitivity curves ~~(15, 25, 35)~~ of directly adjacent  
detection devices ~~(14, 24, 35)~~ at least partly overlap,  
the detection devices ~~(14, 24, 34)~~ supplying a distance  
signal as a function of the distance of the target, in  
which the distance signals determined by the detection  
devices ~~(14, 24, 34)~~ are converted by at least one  
converting device ~~(19, 29, 39, 59)~~ into analogue  
signals, ~~particularly current and/or voltage signals~~ and  
in which from the different analogue signals going back  
to the detection devices ~~(14, 24, 34)~~ the position of  
the target ~~(50)~~ is determined in which the distance

signal is in each case constituted by damping signals of oscillators of detection devices ~~(14, 24, 34)~~, ~~characterized in that~~ wherein the detection device with the second highest damping is used for evaluating the damping signal.

17. (Currently Amended) Method according to claim 16, ~~characterized in that~~ wherein the detection devices ~~(14, 24, 34)~~ are positioned in such a way that a detection curve for the entire path to be monitored can be composed from partial areas with a high positional resolution of the damping curves of the individual detection devices ~~(14, 24, 34)~~ and that for determining the position of the target ~~(50)~~ the measured damping values can be compared with previously, ~~particularly punctiform~~ recorded teach-in data.
18. (Currently Amended) Method according to claim 17, ~~characterized in that~~ wherein for recording the teach-in data the target ~~(50)~~ is guided along the path to be monitored, the position of the target ~~(50)~~ and the respective damping signals of the detection devices ~~(14, 24, 34)~~ being locally recorded.

19. (Currently Amended) Method according to ~~one of the claims~~  
claim 17 or 18,

~~characterized in that~~ wherein  
on recording the teach-in data the position of the  
target ~~(50)~~ is also varied transversely to the path to  
be monitored and the respective positions and damping  
signals are locally recorded.

20. (Currently Amended) Method according to ~~one of the claims~~  
claim 16 to 19,

~~characterized in that~~ wherein  
the sensitivity curves ~~(15, 25, 35)~~ of the detection  
devices ~~(14, 24, 34)~~ are standardized.

21. (Currently Amended) Method according to ~~one of the claims~~  
claim 16 to 20,

~~characterized in that~~ wherein  
for evaluation purposes use is made of a pair of values  
~~consisting of~~ comprising the damping signal with the  
second highest and the highest damping.

22. (Currently Amended) Method according to ~~one of the claims~~  
claim 17 to 21,

~~characterized in that~~ wherein  
for determining the position of the target ~~(50)~~  
interpolation takes place between points of the teach-in  
data.

23. (Currently Amended) Method according to ~~one of the claims~~  
claim 17 to 22,

~~characterized in that~~ wherein

portions of the damping curves are in each case  
approximated by lines for evaluation purposes.

24. (Currently Amended) Method according to ~~one of the claims~~  
claim 16 to 23,

~~characterized in that~~ wherein

for evaluation purposes, in each case, account is taken  
of only one portion of a detection device ~~(14, 24, 34)~~  
or that several detection devices ~~(14, 24, 34)~~ are  
simultaneously evaluated and in particular ratios are  
formed from the analogue signals.